

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

5GAA Petition for Waiver to Allow Deployment of
Cellular Vehicle-To-Everything (C-V2X) Technology in
the 5.9 GHz Band

GN Docket No. 18-357

Revision of Part 15 of the Commission's Rules to Permit
Unlicensed National Information Infrastructure (U-NII)
Devices in the 5 GHz Band

ET Docket No. 13-49

**REPLY COMMENTS OF
NCTA—THE INTERNET & TELEVISION ASSOCIATION**

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INTRODUCTION AND SUMMARY

The Petition for Waiver filed by the 5G Automotive Association (“5GAA”) spurred dozens of responses from commenters in the technology and transportation sectors.¹ Those comments reflect the widespread interest in having the Federal Communications Commission (“Commission” or “FCC”) settle the future of the 5.9 GHz band as expeditiously as possible so that the band can finally begin to attract investment and support intensive use. But they also reveal deep divides concerning 5GAA’s core proposition: that the Commission should bypass normal rulemaking procedures, eliminate existing uses of the top two channels of the 5.9 GHz band, and grant that portion of the band to a single, government-selected technology, without an auction or the sharing responsibilities that come with unlicensed use. Because of the

¹ See 5GAA Petition for Waiver, GN Docket No. 18-357 (filed Nov. 21, 2018) (5GAA Petition).

extraordinary nature of this request, numerous commenters agree that the Commission should reject the 5GAA Petition as procedurally flawed and resolve the issues 5GAA raises through a comprehensive Further Notice of Proposed Rulemaking (“FNPRM”) in the existing 5 GHz band proceeding. Commenters also agree that the Commission should reject the outmoded “beauty contest” approach to spectrum allocation that the 5GAA Petition supports. Nonetheless, allowing standard Commission procedures will facilitate a full consideration of the proposals 5GAA and others have put forward.

I. NUMEROUS PARTIES AGREE THAT THE 5GAA PETITION DOES NOT MEET THE COMMISSION’S WAIVER STANDARD.

The Commission has the authority to waive its own rules only if a waiver would not “undermin[e] the policy which the rule in question is intended to serve” and would be in the public interest.² The 5GAA Petition undermines the existing rules for the 5.9 GHz band by asking the Commission to fundamentally rewrite the rules, including the channelization plan and the operating rules for specific channels. Additionally, the 5GAA Petition is not in the public interest because it gives short shrift to complex issues that should be fully vetted in a rulemaking proceeding and because 5GAA can seek less disruptive and premature relief through experimental licenses. As the Utah Department of Transportation states, the petition “fails to meet the criteria needed to justify the waiver.”³

² *Era Sys. Corp. Request for Waiver of Sections 2.803, 15.201 & 15.253 of the Commission’s Rules*, 24 FCC Rcd. 12179, 12180 (2009) (citing *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969)) (Era Systems Waiver).

³ Comments of the Utah Department of Transportation at 2, GN Docket No. 18-357 (filed Jan. 18, 2019).

A. Granting the 5GAA Petition does not meet the FCC’s waiver standard because it would undermine the existing rules for the 5.9 GHz band.

Numerous parties agree that the 5GAA Petition asks the Commission to undermine the policies behind the 5.9 GHz band’s regulations by rewriting core rules for the top two channels of the band. 5GAA’s attempt to cast these fundamental changes as “conditions” on the waiver does not bring the petition into compliance with the waiver standard.

For example, Cisco Systems, Inc. (“Cisco”), an Intelligent Transportations Systems (“ITS”) chipmaker, argues that 5GAA’s requests “cannot properly be the subject of a waiver proceeding and must be decided by rulemaking.”⁴ Cisco explains that 5GAA’s proposal would eliminate the only mobile service authorized under the band’s current rules from the top two channels.⁵ This would undermine the existing rules in numerous ways, including eliminating DSRC operations from Channel 184, the only channel where higher-power operations are currently allowed.⁶ While NCTA – The Internet & Television Association (“NCTA”) may question the merits of the existing 5.9 GHz rules,⁷ a waiver proposal that would remove a technology that is permitted to use these channels under today’s rules plainly “undermin[es]” the current policy.

⁴ Comments of Cisco Systems, Inc. at 8, GN Docket No. 18-357 (filed Feb. 8, 2019) (Cisco Comments). Even the Association of Global Automakers, which takes no position on the disposition of the waiver, favors a “data-driven regulatory process to answer the relevant questions.” Comments of the Association of Global Automakers, Inc. at 7, GN Docket No. 18-357 (filed Feb. 7, 2019) (Global Automakers Comments).

⁵ See Cisco Comments at 10.

⁶ *Id.*

⁷ Letter from Rick Chessen, Chief Legal Officer, NCTA – The Internet & Television Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 13-49 (filed Oct. 16, 2018).

The Wi-Fi Alliance (“WFA”) agrees that a petition for rulemaking would be more appropriate here than a waiver because, instead of seeking a narrow exception to the rules, 5GAA “seeks to demonstrate that the current rules are unsound or out of date.”⁸ Consequently, to resolve the competing, and mutually exclusive, proposals that have been put forward by 5GAA and proponents of unlicensed services, the best course of action is a “fresh look at the highest and best use of the entire 5.9 GHz band.”⁹

B. The 5GAA Petition fails the waiver standard’s public interest test because it raises complex technical and policy issues that should be vetted in a rulemaking proceeding.

Granting the 5GAA Petition also fails the public interest element of the Commission’s waiver standard. The petition implicates critical technical and policy issues that cannot be resolved based on the limited information that 5GAA has provided.

Though they advocate a very different approach to the 5.9 GHz band from NCTA’s proposal, many in the automotive industry and other ITS interests oppose the 5GAA Petition because core questions about 5GAA’s proposal remain unresolved. For example, Volvo Group, which has participated in vehicle-to-everything (“V2X”) demonstration projects, agrees that any changes to the 5.9 GHz band should be “addressed by a petition, full comment period and rulemaking process,” which will allow for a complete assessment of the interference issues 5GAA’s plan would cause.¹⁰ The American Trucking Associations, Inc. agrees, stating that the

⁸ Comments of Wi-Fi Alliance at 5, GN Docket No. 18-357 (filed Feb. 8, 2019) (Wi-Fi Alliance Comments).

⁹ Comments in Opposition of the Open Technology Institute at New America, American Library Association, Benton Foundation, Consumer Federation of America, Public Knowledge and X-Lab at 4, GN Docket No. 18-357 (filed Feb. 8, 2019) (Public Interest Organizations Comments).

¹⁰ Comments of Volvo Group at 1, GN Docket No. 18-357 (filed Feb. 8, 2019).

Commission should reject the waiver request because a change to the band requires a “rulemaking process.”¹¹ And as the American Association of State Highway and Transportation Officials (“AASHTO”) explains, 5GAA offers no suggestion on how to “transition[] current and planned DSRC-based operations in Channels 182 and 184 to lower channels, or operate via C-V2X.”¹² According to the Wireless Internet Service Providers Association (“WISPA”), this failure to “address incumbent interests”—a problem “inherent in blanket waiver authority for nationwide use of a new technology”—demonstrates that 5GAA has not met the waiver standard.¹³ To be sure, the Commission has the power to reallocate bands that are under-utilized, as the 5.9 GHz band is. But reallocation, by definition, puts the band to a different use than the one set out by the existing rules. That undermines the existing rule and cannot be accomplished through a waiver.¹⁴

This opposition among automotive interests makes sense. Disagreements within the automotive industry and its ITS suppliers about the future of vehicle-to-vehicle and V2X communications continue to be far too substantial to make resolution through a waiver appropriate. For example, uncertainty remains about C-V2X’s actual spectrum needs. The CAR 2 CAR Communication Consortium (“CAR 2 CAR”) argues that 5GAA’s petition does not

¹¹ Comments of American Trucking Associations, Inc. at 1, GN Docket No. 18-357 (filed Feb. 8, 2019).

¹² American Association of State Highway and Transportation Officials Comments at 3, GN Docket No. 18-357 (filed Jan. 11, 2019). The Intelligent Transportation Society of America (“ITS America”) agrees that the “question of whether deployment of C-V2X disturbs existing V2X users . . . warrants further exploration.” ITS America Comments at 5, GN Docket No. 18-357 (filed Feb. 8, 2019).

¹³ Comments of the Wireless Internet Service Providers Association at 6, GN Docket No. 18-357 (filed Feb. 8, 2019) (WISPA Comments).

¹⁴ Era Systems Waiver at 12180.

explain the full picture of C-V2X’s spectrum needs—information that must be accounted for in order to make a broad decision about the future of the band. According to CAR 2 CAR, when C-V2X achieves the “evolution” to 5G projected by 5GAA, “additional spectrum for [5G New Radio] C-V2X” would be necessary since “LTE C-V2X is not seen [as] compatible and interoperable with NR C-V2X.”¹⁵ This and other important factual questions can be resolved during FNPRM proceedings.

Additionally, commenters point out that granting the 5GAA Petition would foreclose options on the table in the Commission’s ongoing rulemaking proceeding. For example, equipment maker Autotalks urges the Commission to promote regulatory certainty by “complet[ing] planning of the entire 5.9 GHz spectrum at once” because the Commission’s decision about adding unlicensed operations to the band will “directly impact the availability of spectrum for V2X”¹⁶ For similar reasons, the Open Technology Institute, American Library Association, Benton Foundation, Consumer Federation of America, Public Knowledge, and X-Lab (the “Public Interest Organizations”) argue that the kind of across-the-board policy change 5GAA seeks is appropriately handled in the Commission’s ongoing rulemaking on the 5.9 GHz band that is “into its sixth year and is expressly considering options that are directly contradictory to carving out a portion of the band for the exclusive use of yet another command-and-control technology.”¹⁷ As the Public Interest Organizations explain:

One option still explicitly under consideration would segment the band, moving ITS real-time safety signaling (V2X) into an exclusive assignment at the top of the band (e.g., 20 or 30 megahertz, as in Europe). By proposing that the top 20

¹⁵ CAR 2 CAR Communication Consortium Comments at 4, GN Docket No. 18-357 (filed Jan. 29, 2019) (CAR 2 CAR Comments).

¹⁶ Comments of Autotalks at 1, 3, GN Docket 18-357 (filed Jan. 18, 2019).

¹⁷ Public Interest Organizations Comments at 2.

megahertz be set aside *exclusively* for one particular ITS standard (C-V2X), 5GAA effectively seeks to hijack what is probably at this time the most plausible outcome of the pending *5.9 GHz NPRM*. The Petition also contradicts what 5GAA has proposed for Europe, with both technologies coexisting on just 30 megahertz.¹⁸

For these reasons, the Commission should “dismiss or deny the Petition because it seeks to achieve by waiver that which should be considered in the context of an ongoing rulemaking proceeding,” instead of short-circuiting the process.¹⁹

C. Experimental licenses will allow 5GAA to continue developing C-V2X without fundamentally altering the Commission’s rules.

Finally, 5GAA has options to continue the process of developing C-V2X while the Commission considers an FNPRM, eliminating the need for the Commission to decide rules of general applicability on a thin waiver record. Several commenters suggest that experimental licenses are most appropriate for the kinds of testing that need to be completed before the Commission can make a final decision about the appropriate rules and spectrum allocation for C-V2X.²⁰ The Association of Global Automakers agrees, stating that “experimental licensing may be a viable option to enable the further development of C-V2X services.”²¹ Those rules are, as Cisco explains, sufficiently “generous and flexible” to allow 5GAA members to develop C-V2X without changing the overall rules for the 5.9 GHz band.²² Unlike 5GAA’s proposed waiver, testing pursuant to experimental licenses—which C-V2X proponents are already using—is limited in time and location, preventing the waiver from swallowing the existing rules. For

¹⁸ *Id.*

¹⁹ WISPA Comments at 4.

²⁰ *See, e.g.*, Comments of Broadcom Inc. at 5–7, GN Docket No. 18-357 (filed Feb. 8, 2019) (Broadcom Comments); Global Automakers Comments at 6; Public Interest Organizations Comments at 7–8.

²¹ Global Automakers Comments at 6; *see also* Broadcom Comments at 6–7.

²² Cisco Comments at 8.

example, the Office of Engineering and Technology recently gave Ford Motor Company experimental authority to conduct yearlong C-V2X testing in California.²³

II. THE COMMISSION SHOULD REJECT 5GAA’S REQUEST THAT THE COMMISSION AGAIN HAND-PICK A SINGLE FAVORED TECHNOLOGY, UNDERMINING THE UTILITY OF THE BAND.

5GAA asks the Commission to return to failed policies of the past by granting a single technology exclusive spectrum based on its supporters’ claims that it will “bring great societal benefits.”²⁴ A range of commenters agree that granting the 5GAA Petition, and thereby exchanging the FCC’s judgment about the best technologies and uses for the band for that of the marketplace, would be a “U-turn on [the Commission’s] modern spectrum policy approach” and would undermine the utility of the band.²⁵ As Cisco notes, it would be a mistake for the Commission to conduct “a technology beauty contest.”²⁶

First, as the Public Interest Organizations emphasize, 5GAA is asking the Commission—and not the marketplace—to decide which V2X communications technology will ultimately achieve adequate funding and commercial acceptance.²⁷ According to WISPA, the Commission has “learned from experience the significant deficiencies of mandating the use of specific technologies when allocating spectrum.”²⁸ And Cisco agrees the Commission should reject 5GAA’s request to allow C-V2X to replace DSRC based on 5GAA’s “claims that its technology

²³ Ford Motor Company, Experimental Radio Station Construction Permit and License, File No. 1020-EX-CN-2018 (effective Feb. 15, 2019).

²⁴ 5GAA Petition at 4.

²⁵ WISPA Comments at 6.

²⁶ Cisco Comments at 6.

²⁷ Public Interest Organizations Comments at 8.

²⁸ WISPA Comments at 7.

is better.”²⁹ That outdated approach would be inconsistent with modern spectrum policy that rejects “silos of special-purpose spectrum bands” in favor of “more intensively-used and flexible general-purpose use of spectrum,” based on experience that technology-specific spectrum policy leads to under-utilization and forfeits substantial economic growth.³⁰ Moreover, assigning all or portions of the 5.9 GHz band exclusively to “any technology or industry group” would risk repeating the failures of the 1999 ITS allocation and leaving the band “fallow for the indefinite future.”³¹ Given the enormous investment and innovation already put towards the next generation of connectivity, all of which depends on the availability of more general-purpose spectrum, the U.S. cannot afford to risk such a wasteful outcome. Foreclosing this opportunity to address the enormous need for more unlicensed spectrum would also run contrary to Congress’s and the FCC’s work supporting the expansion of Wi-Fi and the advancement of 5G.³²

Second, granting exclusive spectrum to C-V2X in a “beauty contest” would also disrupt the ongoing proceeding, which has made substantial progress toward promoting flexible use of the 5.9 GHz band by adding unlicensed uses. Broadcom Inc., which has “invested substantial resources” in the ongoing 5.9 GHz proceeding and in the Commission’s testing, argues that granting the 5GAA Petition would “undermine past efforts” and “create uncertainty for key stakeholders in the automotive and communications industries.”³³ Effectively abandoning those efforts would be especially regrettable when it is not clear that the 5.9 GHz band remains the

²⁹ Cisco Comments at 6.

³⁰ Public Interest Organizations Comments at 9.

³¹ *Id.* at 10.

³² *See* 47 U.S.C. § 1502.

³³ Broadcom Comments at 3–4.

appropriate place for V2X communications at all.³⁴ As WISPA has explained, “if engineers were starting today with a clean slate and looking for a home for automotive operations, they would never choose the 5.9 GHz band.”³⁵ Alternative spectrum options can be explored as part of an FNPRM proceeding.

Finally, a “beauty contest” approach is especially inappropriate when many in the automotive industry question 5GAA’s claims about how C-V2X will work and its effectiveness. CAR 2 CAR, for example, contends that 5GAA’s claims regarding C-V2X’s “significant performance advantages” require further scrutiny, particularly because 5GAA’s testing employed an “[u]nfair comparison between different settings for the two technologies” and because the “DSRC modem used is not representative of commercial devices being deployed.”³⁶ NXP USA, Inc. also finds flaws in 5GAA’s testing, including that 5GAA selected a DSRC device with poor sensitivity, producing misleading results.³⁷ That the only technical evidence 5GAA has offered in support of a permanent change to the 5.9 GHz band is a single, disputed study underscores General Motors Company’s assessment that it is too early to “pick the winners and losers” through a spectrum allocation decision.³⁸

³⁴ Public Interest Organizations Comments at 24.

³⁵ *Id.* (citing Letter from Claude Aiken, President & CEO, WISPA, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 13-49, at 1 (filed Oct. 26, 2018)).

³⁶ CAR 2 CAR Comments at 6–7.

³⁷ Comments of NXP USA, Inc. at Annex A, GN Docket No. 18-357 (filed Jan. 29, 2019); *see also* Cisco Comments at 17 (5GAA’s “test report contains an unpersuasive analysis of C-V2X operations in the presence of an interferer.”).


³⁸ Comments of General Motors Company at 2, 4, GN Docket No. 18-357 (filed Jan. 18, 2019). General Motors states that it supports “temporary access” to the 5.9 GHz band for C-V2X. As explained in NCTA’s comments, there is nothing temporary about the relief sought in the 5GAA Petition. 5GAA puts no time limit on its requested relief, and commercial deployments in consumer vehicles would have long-term consequences, even if the waiver

These deep differences of opinion within the automotive industry are an important reminder of why the Commission should not pick technology winners and losers. If the automotive industry cannot agree on the future of automotive technologies, how can the FCC hope to predict the future of particular technologies or companies? Instead, NCTA urges the Commission to avoid the mistakes of the past by refraining from giving either DSRC or C-V2X special treatment. The Commission should instead open the band to flexible unlicensed operations.

CONCLUSION

Numerous parties agree that the waiver proposed by 5GAA is both procedurally improper and ill-advised. To address the proposals that 5GAA and others have put forward, the Commission should issue an FNPRM in the existing 5.9 GHz band docket to determine the future of the band without delay.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul Margie", is written over a horizontal line.

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came to an end. Comments of NCTA – The Internet & Television Association at 6, GN Docket No. 18-357 (filed Feb. 8, 2019).